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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/783,441	02/14/2001	Marl Philip D'Evelyn	RD-26,782/USA	3415

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GENERAL ELECTRIC COMPANY
GLOBAL RESEARCH
PATENT DOCKET RM. BLDG. K1-4A59
SCHENECTADY, NY 12309

EXAMINER

HENDRICKSON, STUART L

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 07/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

691783441

Applicant(s)

O'Leary

Examiner

Herbickson

Group Art Unit

1751

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

☒ Responsive to communication(s) filed on 4/13/04

☒ This action is **FINAL**.

- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1, 3-9, 13, 16-18, 20, 21, 23-42 is/are pending in the application.
- Of the above claim(s) 23, 24 is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1, 3, 4, 7-9, 13, 16-18, 20, 21, 25-30, 33-42 is/are rejected.
- ☒ Claim(s) 5, 6, 31, 32 is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____.
 - ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

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The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 3, 4, 9, 13, 17, 18, 25 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Oomen.

Oomen teaches in columns 1-2, and refers to an article, a tool containing single crystal diamond with B implanted at the surface. The implantation is taught to increase the lattice size. Even though the diamond is not described in the claimed manner, no differences are seen.

Claims 8, 16, 18, 26-30, 34-39, 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oomen.

The reference does not teach the size or number of diamonds, or the amount of dopant, however size and number do not generally confer patentability; In re Rose 105 USPQ 137. Using the claimed number of diamonds and B concentration in the tool (if different) is an obvious expedient to achieve the desired amount of cutting surfaces or lattice expansion.

Claims 1, 3, 4, 7-9, 13, 16-18, 20, 21, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizuno et al., taken with Marchywka et al.

Mizuno teaches a 3 dimensional faceted diamond with Ar⁺ implanted, although any element can be implanted (col. 2 line 47). The ions do not penetrate to the center, as implied by figs. 2, 6, 7. This differs in not teaching the claimed ions. Marchywka teaches in column 2 ion-implanting diamonds, and teaches the claimed B,N ions as equivalents to Ar. Also, it is taught that the ions are implanted near the surface and thus non-uniformly in the diamond, and thus there is a gradient and a minimum concentration at the center. Using an ion of Marchywka in the process of Mizuno is an obvious expedient to create a doped diamond with the particular properties desired. Since the combined process is the same, so too is the result. The amount of doping, if not the same, is an obvious expedient to gain the desired resistance. Mizuno fig. 2 implies the surface doping of claim 9. A small diamond of claim 16 is an obvious expedient to

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provide a sensitive tip without a large mass of diamond (Mizuno col. 4 line 25). Mizuno appear to make the structure of claim 20, the electrode being the outer layer.

The examiner takes Official Notice that ions claimed but not explicitly listed by the references are old and known to be implanted into diamond.

Claims 26-30, 33-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizuno et al., taken with Marchywka et al. as applied to claim 1, 3, 4, 7-9, 13, 16-18, 20, 21, 25 above, and further in view of Oomen.

The above references do not teach a tool, however Oomen does in column 1. Using more than one diamond is an obvious expedient to gain additional cutting function; *In re Rose supra*.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1,3,4,8,9,13,16-18,25 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 9-16 of U.S. Patent No. 6322891.

Although the conflicting claims are not identical, they are not patentably distinct from each other because they possess the claimed properties due to the similarity by which they were made.

The claims were commonly owned at the time of filing. Despite the current assignment to diamond Innovations, it appears that the real owner is General Electric, as it owns/controls/funds/operates Diamond Innovations.

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Applicant's arguments filed 4/13/04 have been fully considered but they are not persuasive. The argument that all the features are not taught overlooks the fact that the rejection is made under 102/103, see MPEP 2112. A diamond with all the dopant at the surface meets the claims because the claims do not require that the 'local minimum' concentration be higher than zero dopant. This also meets the 'concentration is greater away from the middle' limitations. The effect (stress) is deemed present by virtue of the same dopant being present as claimed. The fact that '551 does not prefer the claimed diamond, rather one which is as homogeneous as possible, does not detract from the teaching of what is claimed. Even though '282 does not recite the claimed verbiage verbatim, the properties are deemed possessed for the reasons expressed in the rejection.

Applicant's response necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication should be directed to examiner Hendrickson at telephone number (571) 272-1351.



Stuart Hendrickson
examiner Art Unit 1754